A112-1/511 & (a)

MEMO

To [redacted]

From [redacted]

Date 10/30/51

Answering Your Memo

Subject PLASTIC SAMPLES

The plastic sample which you submitted is unlike any plastic material we know.

It is thermoplastic but its flow-point is 305°-320°C. which exceeds the flow-point of any common American thermoplastic resin. It is unaffected by autoclaving at 15 psi for 1/2 hour. Concerning flammability, it continues to burn without dripping after removal from the source of ignition.

The material is hard and somewhat brittle suggesting that it contains little or no plasticizer. Its density is about 1.19.

It is waterproof. No attempt was made to measure its resistance to moisture vapor although it is assumed it would have a measurable moisture vapor transfer rate.

It is insoluble in water, carbon tetrachloride, ethyl alcohol, ethyl ether, and nitric acid. It dissolves in concentrated Sulphuric Acid without charring and is soluble in Acetone, Benzene, Chloroform, and Ethyl Acetate.

Beilstein test for halogen was negative indicating that it is not a polymerized organic chloride such as polyvinyl chloride or polyvinylidene chloride.

Light transmission of the unpolished sample from 3500 A° to 6500 A° is nearly constant, but transmission drops rapidly between 3250 A° and 2850 A° approaching opacity.

H-B/6 [redacted]

[redacted]

cc: Control Files

[redacted]